## IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (currently amended): A multilayer printed wiring board manufacturing apparatus comprising:

a processing laser source configured to emit a laser beam;

a scanning head configured to deflect the laser beam in X-Y directions;

an X-Y table configured to hold a multilayer printed wiring board placed thereon, the multilayer printed wiring board having an interlayer resin insulator and at least one positioning mark;

a camera configured to measure a position of the at least one positioning mark ~~covered by the interlayer resin insulator~~ by detecting light reflected by the at least one positioning mark through the interlayer resin insulator; and

a control apparatus having an input section to which processing data of the multilayer printed wiring board is input, an arithmetic operating section configured to correct the processing data based on the position of the at least one positioning mark and generate drive data for controlling at least one of the X-Y table and the scanning head to apply the laser beam to the multilayer printed wiring board and form a hole in the interlayer resin insulator, and a memory section configured to store the processing data and the drive data.

Claim 2 (previously presented): The multilayer printed wiring board manufacturing apparatus according to claim 1, wherein said at least one positioning mark comprises a metal conductor.

Claim 3 (previously presented): The multilayer printed wiring board manufacturing apparatus according to claim 1, wherein said at least one positioning mark comprises a material same as a conductive circuit.

Claim 4 (currently amended): A multilayer printed wiring board manufacturing method comprising:

forming at least one positioning mark on a multilayer printed wiring board;

forming at least one interlayer ~~insulating agent layer~~ resin insulator covering the at least one positioning mark;

providing a multilayer printed wiring board manufacturing apparatus including a processing laser source configured to emit a laser beam, a scanning head configured to deflect the laser beam in X-Y directions, a camera configured to measure a position of the at least one positioning mark, an X-Y table configured to hold the multilayer printed wiring board, and a control apparatus having an input section to which processing data of the multilayer printed wiring board is input, and an arithmetic operating section configured to correct the processing data based on the position of the at least one positioning mark;

placing the multilayer printed wiring board having said at least one positioning mark on the X-Y table of the multilayer printed wiring board manufacturing apparatus;

measuring the position of the at least one positioning mark ~~of the multilayer printed wiring board~~ through the at least one interlayer resin insulator with the camera by detecting light reflected by the at least one positioning mark;

correcting the input processing data based on the position of the at least one positioning mark;

generating drive data for driving at least one of the scanning head and the X-Y table in the arithmetic operating section;

controlling at least one of the X-Y table and the scanning head based on the drive data; and

applying the laser beam to the multilayer printed wiring board to form a hole in the at least one interlayer ~~insulating agent layer~~ resin insulator.

Claim 5 (previously presented): A multilayer printed wiring board manufacturing apparatus comprising:

a $CO_2$ laser source configured to emit a laser beam;

a scanning head configured to deflect the laser beam in X-Y directions;

an X-Y table configured to move a multilayer printed wiring board disposed thereon; and

harmonic wave generating means for converting the laser beam emitted from said $CO_2$ laser source to a beam of a second harmonic wave,

wherein at least one of the scanning head and the X-Y table is controlled to apply the laser beam to the multilayer printed wiring board to form a via hole in the multilayer printed wiring board.

Claim 6 (canceled)

Claim 7 (previously presented): A multilayer printed wiring board manufacturing apparatus comprising:

a $CO_2$ laser source configured to emit a laser beam;

harmonic wave generating means for converting the laser beam to a shortened wavelength laser beam of a second harmonic wave;

a scanning head configured to deflect the shortened wavelength laser beam in X-Y directions;

an X-Y table configured to hold a multilayer printed wiring board placed thereon, the multilayer printed wiring board having at least one positioning mark;

a camera configured to measure a position of the at least one positioning mark of the multilayer printed wiring board; and

a control apparatus having an input section to which processing data of the multilayer printed wiring board is input, an arithmetic operating section configured to generate drive

data for driving at least one of the scanning head and the X-Y table based on the position of the at least one positioning mark and the processing data and controlling at least one of the scanning head and the X-Y table to apply the shortened wavelength laser beam to the multilayer printed wiring board to form a hole in the multilayer printed wiring board, and a memory section configured to store the processing data and the drive data.

Claim 8 (previously presented): The multilayer printed wiring board manufacturing apparatus according to claim 5 or claim 7, wherein said harmonic wave generating means comprises at least one non-linear optical crystal which reflects the laser beam emitted from the $CO_2$ laser source to a harmonic wave emitting side and transmits the shortened wavelength laser beam.

Claim 9 (previously presented): The multilayer printed wiring board manufacturing apparatus according to claim 8, wherein said at least one non-linear optical crystal comprises a material selected from the group consisting of tellurium, gallium-selenium, antimony sulfide, arsenic sulfide, mercury sulfide and selenium.

Claim 10 (previously presented): A multilayer printed wiring board manufacturing method comprising:

providing a manufacturing apparatus comprising a $CO_2$ laser source configured to emit a laser beam, a harmonic wave generating apparatus configured to convert the laser beam emitted from said $CO_2$ laser source to a shortened wavelength beam of the second harmonic wave, a scanning head configured to deflect the shortened wavelength beam in X-Y directions, an X-Y table configured to hold a multilayer printed wiring board having at least one target mark and an interlayer resin insulator, and a camera configured to measure a position of the at least one target mark;

measuring with the camera the position of the at least one target mark of the multilayer printed wiring board placed on the X-Y table;

generating drive data for driving at least one of the scanning head and the X-Y table based on the position of the at least one target mark and the processing data;

controlling at least one of the X-Y table and the scanning head based on the drive data; and

applying the shortened wavelength beam of the second harmonic wave transmitted from the harmonic wave generating apparatus to the multilayer printed wiring board to form a hole in the interlayer resin insulator.

Claim 11 (previously presented): A laser processing apparatus comprising:

a $CO_2$ laser source configured to emit a laser beam;

harmonic wave generating means for converting the laser beam to a shortened wavelength beam of a second harmonic wave;

a scanning head configured to deflect the shortened wavelength beam in X-Y directions; and

an X-Y table configured to move a work piece to be processed,

wherein at least one of the scanning head and the X-Y table is controlled to apply the shortened wavelength beam to the work piece to form a via hole in the work piece.

Claims 12-25 (canceled)

Claim 26 (previously presented): The multilayer printed wiring board manufacturing apparatus according to Claim 5, wherein said via hole is formed by focusing the beam.

Claim 27 (previously presented): The multilayer printed wiring board manufacturing apparatus according to Claim 11, wherein said via hole is formed by focusing the shortened wavelength beam.

Claim 28 (currently amended): The multilayer printed wiring board manufacturing method according to Claim 4, wherein the at least one interlayer ~~insulating agent layer~~ resin insulator has light transmissivity.

Claim 29 (amended): The multilayer printed wiring board manufacturing method according to Claim 4, ~~wherein the~~ further comprising a light source configured to illuminate the at least one positioning mark, the light source ~~comprises~~ comprising a light emitting diode.

Claim 30 (previously presented): The multilayer printed wiring board manufacturing method according to Claim 4, wherein the at least one positioning mark has a rough surface.

Claim 31 (previously presented): The multilayer printed wiring board manufacturing method according to Claim 4, wherein the processing data comprises hole coordinate data, and the hole coordinate data is corrected in view of a size change of the multilayer printed wiring board to produce a modified hole coordinate data.

Claim 32 (previously presented): The multilayer printed wiring board manufacturing method according to Claim 4, wherein the scanning head is controlled based on the drive data.

Claim 33 (previously presented): The multilayer printed wiring board manufacturing method according to Claim 4, further comprising generating a laser data based on the position of the at least positioning mark, the laser data indicating timing of a laser oscillation of the processing laser source.

Claim 34 (currently amended): The multilayer printed wiring board manufacturing method according to Claim 4, wherein the at least one interlayer ~~insulating agent layer~~ resin insulator comprises a plurality of interlayer ~~insulating agent layers~~ resin insulators including an upper layer and an lower layer, the at least one positioning mark comprises a plurality of positioning marks including a positioning mark provided in the upper layer and a positioning mark provided in the lower layer, and the positioning mark of the upper layer is deviated from the positioning mark of the lower layer.